NOTES FROM 04.06.05 PROTON DRIVER MEETING - CIVIL

Attendees: Bill Foster, Elliott McCrory, Lester Wahl, Chuck Schmidt, Ken Quinn, Doug Moehs, Dixon Bogert, Rod Walton, Gary VanZandbergen, Elaine McCluskey

ITEMS DISCUSSED:

Meeting focused on space programming for L-0 and L-1 buildings and L-0 enclosure level space below:

1. **L-0 Building – Front End:** Discussed how this building would be used during operations. Attached L-0 Building space programming document gives current status.

2. **L-0 Enclosure Level:** Discussed how this space would be utilized and accessed. Attached L-0 Enclosure Level space programming document gives current status.

3. **L-1 Building – Klystron Gallery**: Discussed how this building would be used during operations. Attached L-1 Building space programming document gives current status.

ITEMS FOR NEXT MEETING:

- Layout one RF station. To that end, these people have been invited to provide input: Dan Wolff, Howie Pfeffer, Brian Chase, Bob Webber', Elliott McCrory, Maurice Ball, Bob Slazyk, Ken Quinn, Lester Wahl, Chris Jensen

NEXT MEETING 4/13/05 AT 9:30 A.M. IN THE conFESSional WH5NE

Fermilab

PROTON DRIVER
SPACE PROGRAMMING

AREA/BUILDING NAME:
L-0 Building, Front End

FUNCTIONS:
1. Personnel access to beamline enclosure – stairs & elevator
2. Equipment access to beamline enclosure – elevator & crane
3. Access required for installation and operation of beamline equipment
4. Access required for installation and operation of klystron gallery equipment
5. House electrical equipment
6. House controls equipment
7. House utilities: include water skids in lower level in enclosed room to limit noise
8. Provide tech spaces and offices
9. Provide klystron storage area: maybe 3 spares for every 12 klystrons (currently keep 3 for 7 for existing linac). Need to maintain spares, ok to keep all these in this building vs along gallery
10. Provide klystron test area: need test area for each type. Includes modulator with dummy load
11. Provide parts storage area

MATERIAL HANDLING REQUIREMENTS:
Equipment may be able to go down elevator – need equipment sizes.
Hatch with crane is probably still required – need equipment sizes.

SPECIAL HEIGHT/WIDTH REQUIREMENTS INSIDE FACILITY:

OCCUPANCY EXPECTED:
Linac group: 6-8 people with possibly their own offices
Mechanical support group: 2-3 people

PERSONNEL FACILITIES REQUIRED:
TOILET ROOMS yes
ELEVATOR?
SIZE:

CAPACITY:

SPECIAL POWER REQUIREMENTS:

SPECIAL HEATING/COOLING/HUMIDITY REQUIREMENTS:

Fermilab

PROTON DRIVER
SPACE PROGRAMMING

AREA/BUILDING NAME:
L-0 Enclosure Level

FUNCTIONS:
1. House radio-frequency quadrupole (RFQ) and associated equipment (including things like water skids)
2. Provide access to L-0 Building above via stairs & elevators for people
3. Provide access to L-0 Building above via crane w/ hatch and elevator
4. Provide storage area for golf carts & charging station
5. Provide space for 2 ion sources, 2 RFQs for redundancy – DESY has this

MATERIAL HANDLING REQUIREMENTS:
Size of RFQ:

SPECIAL HEIGHT/WIDTH REQUIREMENTS INSIDE FACILITY:
Same floor elevation as linac beamline enclosure adjacent

OCCUPANCY EXPECTED:
None regularly

PERSONNEL FACILITIES REQUIRED:
TOILET ROOMS no
ELEVATOR see L-1 Building
SIZE:
CAPACITY:

SPECIAL POWER REQUIREMENTS:

SPECIAL HEATING/COOLING/HUMIDITY REQUIREMENTS:

Fermilab

PROTON DRIVER
SPACE PROGRAMMING

AREA/BUILDING NAME:
L-1 Building, Klystron Gallery

FUNCTIONS:
1. House equipment for RF power generation, including klystrons, modulators, controls & utility services
2. Provide workbench spaces every 500 ft for Linac techs
3. Provide mandoor egress and overhead door accesses every 500 ft
4. Provide holding area for equipment at each OH door
5.

MATERIAL HANDLING REQUIREMENTS:
Provide polished and extremely level floor to utilize existing air-truck type equipment
&/or
Provide rail system along floor or in roof beams
&/or
Provide hoists as in existing linac to remove klystrons

SPECIAL HEIGHT/WIDTH REQUIREMENTS INSIDE FACILITY:
Currently set at 18’ clear width and 12’ clear height

OCCUPANCY EXPECTED:
Will be accessed by personnel from Front End Building
?? will there be many visitors? This affects how equipment positioning and maintenance is planned.

PERSONNEL FACILITIES REQUIRED:
TOILET ROOMS every 500 ft
ELEVATOR no
SIZE:
CAPACITY:

SPECIAL POWER REQUIREMENTS:
Provide power distribution panels one every two rf stations to ease LOTO activities during maintenance/operations

SPECIAL HEATING/COOLING/HUMIDITY REQUIREMENTS:

OTHER:
Provide CATV or webcams along gallery for observation/troubleshooting, maybe one per RF station